



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,562	08/26/2003	Gavin P. Towler	108165	5155
23490	7590	06/04/2007	EXAMINER	
HONEYWELL INTELLECTUAL PROPERTY INC			ECHELMAYER, ALIX ELIZABETH	
PATENT SERVICES				
101 COLUMBIA DRIVE			ART UNIT	PAPER NUMBER
P O BOX 2245 MAIL STOP AB/2B			1745	
MORRISTOWN, NJ 07962				
			MAIL DATE	DELIVERY MODE
			06/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	Application No.	Applicant(s)
	10/648,562	TOWLER ET AL.
	Examiner	Art Unit
	Alix Elizabeth Echelmeyer	1745

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 16 May 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
- a) The period for reply expires 3 months from the mailing date of the final rejection.
 - b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) They raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) They raise the issue of new matter (see NOTE below);
 - (c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. Applicant's reply has overcome the following rejection(s): _____.
6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. For purposes of appeal, the proposed amendment(s): a) will not be entered, or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____.
13. Other: _____.

Continuation of 11. does NOT place the application in condition for allowance because: the arguments provided to the examiner are not convincing to overcome the Final Rejection of March 20, 2007. The arguments, presented in three paragraphs on pages 2-3 of the Request for Reconsideration, will be addressed in the order they are presented. The first argument, on page 2, is that the wicking system of Bloomfield et al. does not use pressure to provide water to the metal hydride to generate hydrogen. The examiner disagrees. Difference in water vapor pressure between the two compartments drives water from the compartment with higher pressure, where it is contained, to the compartment with lower pressure. Applicants argue that this mechanism does not meet the limitation in claim 10 that the second, or water-containing, compartment is "under pressure" since it is at atmospheric pressure. Gases and liquids, such as water, are in fact under pressure at atmospheric pressure. For a liquid not to be under pressure, it would have to be in an environment without pressure, which is not found in ambient environments.

Next, Applicants argue that the combination of Schirmer et al. and Bloomfield et al. is not proper because Schirmer et al. is not in the field of hydrogen generation for fuel cells. This is correct, but Applicant's invention is not in the field of hydrogen generation for fuel cells: the claims currently under examination are classified in class 422, subclass 239 as a chemical reactor having a reaction chamber including at least one perforated, porous, or semipermeable wall and adapted for holding a solid reactant. Schirmer et al. is also classified in class 422, under the same subheading of chemical reactor. Additionally, both the instant invention and Schirmer et al. teach removing carbon dioxide from hydrogen gas using an absorption system. It is this teaching of Schirmer et al. that is relied upon in the rejection. Both Schirmer et al. and the instant invention solve the same problem of carbon dioxide contamination.

In the paragraph spanning pages 2 and 3, Applicants argue that the semi-permeable membrane of Hockaday et al. does not perform the same function as the membrane of the instant invention. Applicants have not provided arguments concerning claim 5. As for claim 11, the membrane maintains a pressure difference between the fuel chamber and the reaction chamber. It is a pressure differential that drives the reactions of Bloomfield et al., and since the membrane of Hockaday et al. also creates a pressure differential, it would be obvious to substitute the membrane for the wick. The limitation requiring that the liquid be "under pressure" is addressed above. As for the arguments concerning claim 12, Applicants state that the flexible diaphragm of Hockaday et al. is not analogous to the elastomeric seal of claim 12. Claim 12 does not recite an elastomeric seal, but a "flexible elastomeric material disposed on an external face of the housing and in a surrounding relationship to the portion of the first compartment covered with the hydrophobic membrane." The flexible diaphragm of Hockaday et al. surrounds the entire system, thus also surrounding the first component covered with the hydrophobic membrane.



SUSY TSANG-FOSTER
PRIMARY EXAMINER